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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,438	04/16/2004	Jong-Jin Park	8733.1023.00-US	8011

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EXAMINER

DUDEK, JAMES A

ART UNIT	PAPER NUMBER
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2871

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/26/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/825,438

Applicant(s)

PARK ET AL.

Examiner

James A. Dudek

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11, 12, 15-17, 19-29 and 31-42 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11, 12, 15-17, 19-29 and 31-42 is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The language “each of R, G, B, and W subpixels of a pixel is arranged to be symmetric with respect to the gate line to R, G, B, and W subpixels of the same color of an adjacent pixel of the plurality of pixels” is nonsensical. As the Examiner is not sure what applicant is trying to claim, the examiner will not consider this limitation until it is clarified.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's related art (“ARA”) in view of 20050018108 (“108”).

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Per claim 1-3, 5-7, ARA figure 2A and 3 teach an in-plane switching mode liquid crystal display device, comprising: a plurality of R (Red), G (Green) and B (Blue) pixels defined by a plurality of gate lines and a plurality of data lines [3 denotes the bent portion]; a driving element in the pixel [19]; and at least one pair of electrodes disposed in the pixel to form a horizontal electric field [5,7], wherein the R, G, and B pixels are arranged in a zigzag pattern in a data line direction, and each of R, G, and B pixels is arranged to be symmetric with respect to the gate line to adjacent R, G, and B pixels. ARA lacks dedicated white subpixels. However, it was well known or conventional to use dedicated white pixels. 108 teaches it was conventional [see paragraph 0016]. Furthermore it was well to produce white without the need for complex driving multiple subpixels. Accordingly, it would have been obvious to one of ordinary skill at the time of invention to combine ARA with 108.

Claim 8 adds to claim 1, the R, G, B, and W subpixels are arranged in a zigzag pattern in a data line direction, the subpixels of adjacent pixels being arranged in a different direction to compensate a main viewing angle of each of R, G, B, W subpixels [the ARA teaches this limitation in figure 3, figure 3 shows the same color above the gate line and below the gate line and the directions above and below are opposite].

Per claim 4, ARA teaches the device of claim 3, wherein the common electrode and the pixel electrode have at least one bent portion [see branches extending from horizontal bus regions of the pixel and common electrodes].

Per claim 9, ARA teaches the device of claim 8, wherein direction of the electrodes in each of R, G, B, and W subpixels is symmetric to that of the electrodes in adjacent R, G, B, and W subpixels with respect to the gate line [see figure 3].

Allowable Subject Matter

Claims 11-12, 15-17, 19-28, 31-42 is allowed.

Response to Arguments

Applicant's arguments filed 11/22/06 have been fully considered but they are not persuasive.

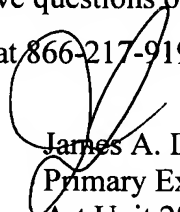
Applicant's first argument addresses claims 1-7. There is only a slight change in claims 1-7 due to the 112 rejection. Applicant argues that ARA and Okumura fail to teach a symmetric pixel arrangement with respect to the gate line. Figures 2A of Applicant's related art shows the gate line 2 located between the pixels electrodes 9. Figure 3 shows a red pixel above and below the gate line, a green pixel above and below the gate line and a blue pixel above and below the gate line. Thus, figure 3 shows the red, blue and green pixels are symmetric with respect to the gate line. Lacking, as stated in the rejection, is a white pixel. Adding white pixels was conventional. Furthermore, since the related art uses a linear subpixel arrangement, the white pixel would have been added to the pixel immediately after the blue pixel. That is, the primary reference is being modified only to add a white pixel and the linear pixel arrangement taught by the primary reference would still be used. This configuration results in the white pixels not being adjacent to each other. As to these claims, Applicant fails to persuade the Examiner.

Regarding Applicant's second argument addressing claims 8-9, see rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Dudek whose telephone number is 571-272-2290. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Nelms can be reached on 571-272-1787. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James A. Dudek
Primary Examiner
Art Unit 2871